

EAST-WEST FREEWAY STUDY



PREPARED BY THE STAFF OF THE
CENTRAL PLANNING BOARD
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These

EAST-WEST FREEWAY STUDY

An Analysis of Two Alignments Proposed by
the State Highway Department

Prepared by the staff of:

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EAST-WEST FREEWAY STUDY

An Analysis of Two Alignments Proposed By the State Highway Department

I HISTORY. Proposals for an East-West Freeway, or its prototype, date back to at least the 1920's. Since 1944 there have been a series of plans for a comprehensive East-West Freeway system. In 1944 the Newark Central Planning Board undertook a study of an East-West Freeway after the New Jersey State Highway Department released its plans for the Stickel Bridge. An alternate plan for interchanges was submitted to the Newark City Commission for improvement of the State's design in terms of the effect of the Stickel Bridge upon traffic in Newark, and a compromise was reached with the State Highway Department.

Between 1945 and 1947 Harland Bartholomew and Associates, consultants to the Newark Central Planning Board, prepared a major street plan which proposed an East-West Freeway as an element of the inner loop for Newark. In May, 1948, Edwards and Kelcey, as consultants to the State Highway Department, proposed two East-West Freeways, one through the center of Newark, and the other through North Newark, to be connected by a so-called "Montclair connector". In 1951, the Citizens' Highway Committee of Essex County adopted the Edwards and Kelcey proposals, with the exception of adding a connection to the Stickel Bridge to provide a complete inner loop. In 1952, the State Highway Department proposed the extension of Raymond Boulevard as a non-grade separated highway with coordinated traffic lights, but this proposal received no authoritative local support.

In 1952, the State again proposed a freeway north of the D. L. & W. railroad right-of-way, to extend as far as the Garden State Parkway in East Orange with no possibility of westward extension. This route would have connected with both the Stickel Bridge and Raymond Boulevard utilizing elevated construction through Roseville between 6th and 7th Avenues. During 1952 the City made three alternate proposals to this State proposal, and proposed easterly connections to Raymond Boulevard via the City subway right-of-way and to the Stickel Bridge, and westward extension beyond the Garden State Parkway. In 1953 a toll turnpike, paralleling Route 10 through North Newark, was proposed as a facility of the New Jersey Turnpike Authority. In 1956 the State proposed a new alignment which was similar to one of the 1952 revisions of the City of Newark. This alignment would have paralleled the D. L. & W. Railroad.

In 1956 Newark's Traffic Engineer proposed a comprehensive plan for freeways for Newark, one element of which was an East-West Freeway similar in alignment to the State's 1956 proposal. Finally, in the fall of 1957, the East-West Freeway was proposed as F. A. I. 280 of the interstate Highway System, thus being made eligible for 90% federal aid. The proposed alignment through Newark, and a proposed alternate alignment, are discussed below.

The proposed East-West Freeway will have its western terminus at relocated Route 46, near Pine Brook, and then will proceed eastward through Roseland, Livingston, West Orange, Orange, East Orange and the Roseville section of Newark to the Stickel Bridge, then parallel to the D. L. & W. Railroad through Harrison and Kearny to a new connection with the New Jersey Turnpike, and via the Turnpike to the Lincoln Tunnel approach

system. This Freeway will be connected to a midtown distributor, which will join the relocated Route 22, to become F. A. I. 78. The midtown distributor will be included in the 50% federal aid program.

II STANDARDS FOR EVALUATING THE EAST-WEST FREEWAY PROPOSALS. In analyzing the adequacy of the two proposed alignments for the East-West Freeway, the following standards or principles will be considered:

- A. Does the proposed Freeway recognize Newark as the business and industrial center of North Jersey? In order to serve Newark the East-West Freeway must connect with major highways in the area, specifically the Garden State Parkway.
- B. Will the Freeway enable traffic, not terminating in Newark, to bypass Newark without using city streets?
- C. Will the Freeway, through adequately planned exit ramps, enable traffic to enter the central business district of Newark and find parking space with the least possible overloading of local streets?
- D. Will the freeway provide sufficient entrances and exits for traffic originating and terminating in Newark?
- E. Will the Freeway form the northern portion of the proposed inner loop, and will it have full interchanges with other sectors of the loop? This inner loop is conceived as a major distributor highway circling Newark's central business district which will enable traffic to travel from one side of Newark to the other without traversing the heavily congested central business district. This proposed inner loop is composed of the East-West Freeway on the north, the midtown connector on the west, the realigned Route 22 (F. A. I. 78) on the south, and

an improved McCarter Highway on the east.

- F. How much damage will the Freeway inflict upon residential and commercial areas through which it passes?
- G. Will the design of the Freeway minimize interference with local traffic at interchanges through adequately designed intersections and a minimum closing of streets?
- H. Will the design of the Freeway encourage the further development of the area through which it passes rather than becoming a deterrent to residential and commercial development?

III PROPOSED "J" ALIGNMENT. The State Highway Department in the fall of 1957 proposed the "J" alignment for the East-West Freeway (Map 1). This alignment enters Newark at the East Orange line south of the D. L. & W. railroad tracks and remains south of the tracks which it crosses in the vicinity of N. 6th and N. 7th Streets. It then remains north of the railroad right-of-way until it meets the Stickle Bridge approach. The connector to a proposed north-south distributor leaves the major portion of the East-West Freeway in the vicinity of the City railway and crosses Orange Street, joining the north-south route at Sussex Avenue. The State Highway Department has studied the "J" alignment in terms of both a depressed and an elevated structure. The City of Newark has been informed by the State that the depressed structure on this alignment can not be considered due to excessive costs and drainage difficulties. Consequently, only an elevated roadway is discussed for this alignment.

IV ENGINEERING DESIGN OF AN ELEVATED STRUCTURE ON THE "J" ALIGNMENT:

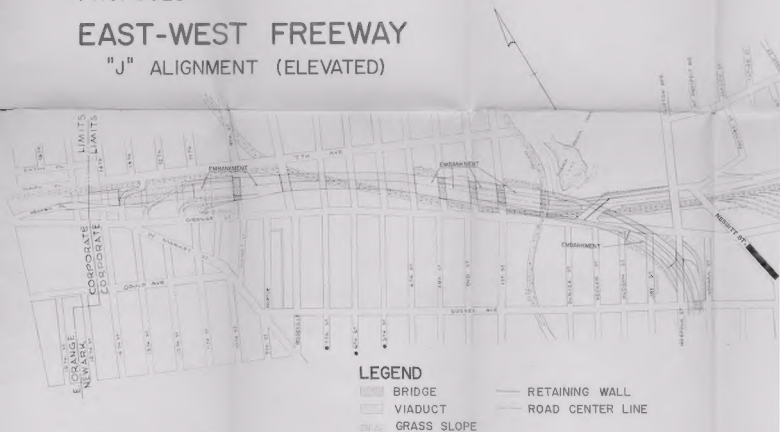
- A. The elevation, type of structure, and adjacent land treatment

x

E

MAP NO. 1

"J" ALIGNMENT (ELEVATED)





— RETAINING WALL
— ROAD CENTER LINE

MAP NO. 1

and study after the selection of an alignment and the preparation of final engineering plans. However, the elevated alignment plans as presented to the City at this date call for the following ramps:

1. Entrance ramps:

- (a) At North 11th Street, immediately north of Orange Street, for east bound traffic.
- (b) At Clifton Avenue, immediately north of the D. L. & W. Railroad, for west bound traffic.
- (c) On Norfolk Street between Sussex and Dickerson for south bound traffic.

2. Exit Ramps:

- (a) On N. 11th Street and Hedden Place, immediately north of Orange Street, for west bound traffic.

C. The location of exit and entrance ramps determine to a large extent what streets are to be closed. The location of the ramps discussed above would require the following streets to be closed:

- 1. N. 11th Street between Orange and Hedden Place.
- 2. Jay Street between Central and Sussex.

D. The State has made the following estimates of ratable loss and displacement of structures through the "J" alignment:

Loss of ratables: \$1,400,000

Structure displacement:	
Residential dwelling units:	550
Commercial and industrial:	82
Public or exempt:	2

The Newark Central Planning Board Staff has made the following estimates of ratable loss and displacement of structures through the "J" alignment:

Loss of ratables:

Residential:	\$1,011,000
Commercial:	82,000
Industrial:	5,000
TOTAL:	\$1,100,000

Structure displacement:	
Residential dwelling units:	530
Commercial:	56
Industrial:	11
Public or exempt:	6

The public or exempt category include the following properties: State Armory and Barracks, portion of Newark Academy Land, Alaron Association, City of Newark Stables.

REPLACED "A" ALIGNMENT (See map #) At the request of Mayor Carlin, the State Highway Department studied an alternate alignment which would make depressing the freeway economically feasible. This "A" alignment enters Newark between Second and Seventh Avenues, (Map 2) curves northward remaining just south of the Humboldt Gould-Warren intersection, continues further

MAP NO. 2

PROPOSED

EAST-WEST FREEWAY

"K" ALIGNMENT (DEPRESSED)

NEWARK
CORPORATE
AVENUE

HERDITT ST

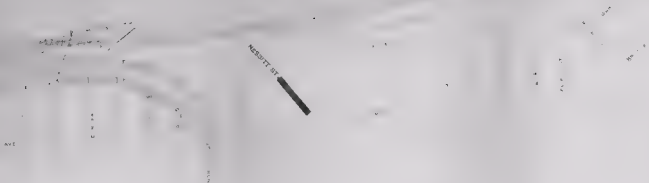
LEGEND

GRASS SLOPE

VIADUCT

RETAINING WALL

ROAD CENTER LINE



MAP NO. 2

northward and moves eastward, south of and adjacent to Orange Street. It then connects with the north-south connector on approximately the same alignment as the "J" alignment. This "K" alignment has been studied by the State as a depressed, an elevated, and a semi-elevated structure. This report considers only the depressed proposal.

VI ENGINEERING STUDY OF A DEPRESSIONED STRUCTURE ON THE "K" ALIGNMENT.

- A. The major portion of the depressed structure along the "K" alignment is depressed to an average of 23' below existing ground elevation. No slopes from the Freeway to the adjacent properties are provided except at the following places:

southside: between N. 7th and N. 8th Streets
 northside: between N. 6th and N. 7th Streets
 southside: between N. 2nd and N. 3rd Streets
 southside: between Hecker and Jackson Streets

- B. The State Highway Department has indicated to the City of Newark that exit and entrance ramps have not been finalized at this design stage and their locations will be open for discussion upon the selection of an alignment and the preparation of final plans. However, the elevated alignment plans as presented to the City call for the following ramps:

1. Entrance ramps:

- (a) Gould Avenue between N. 14th Street and Sterling Avenue in East Orange, for west bound traffic.
- (b) Clifton Avenue, just north of N. L. & W. Railroad for west bound traffic.

- (c) On Norfolk between Sussex and Central for south bound traffic.

2. Exit ramps:

- (a) On Orange Street between Hudson and Hecker for north and west bound traffic.
- (b) On Sussex between Jay and Norfolk for east and south bound traffic.

C. The following streets will be closed:

- 1. Jay between Sussex and Orange
- 2. Hudson between Sussex and Orange
- 3. N. 2nd between Sussex and Orange
- 4. N. 3rd between Sussex and Orange

D. The State made the following estimates of ratable loss and displacement of structures by the "X" alignment:

Loss of ratables: \$2,300,000

Structure displacement:

Residential:	859
Commercial:	79
Public or exempt	0

The Newark Central Planning Board staff has made the following estimates of probable loss and displacement of structures by the "K" alignment:

Loss of retables:

Residential:	\$1,793,200
Commercial	324,100
Industrial	367,200
TOTAL	<u>\$2,484,500</u>

Structure displacement:

Residential dwelling units:	778
Commercial	53
Industrial	5
Public or exempt	9

The public or exempt category include the following properties: Rossville and East Orange Hebrew Association--Congregation B'nai Zion, Sarah Ward Nursery, portion of the Newark Academy property, City of Newark Stables, Christian Science Society, Calvary Gospel Church and residential properties belonging to the Methodist Church and Presbyterian Hospital.

VII EFFECT OF ALIGNMENTS ON THE ROSEVILLE SECTION OF NEWARK

Roseville is a well defined residential community of the City. Its commercial and institutional area extends East and West along Orange Street from its center at Roseville Avenue. The "H" alignment, as discussed above, because of its proposed elevated structure, will seriously affect the character and integrity of this community. Since a great deal of the Freeway will not only be elevated, but also will be an embankment with concrete walls, from 21 to 26 feet above existing ground elevation, it will permanently divide the community. The placement of the Freeway along this alignment is directly in opposition to the "neighborhood concept" established in the Master Plan and being further developed in the present Urban Renewal Planning. Its effect upon adjacent properties will be even greater, since noise and dirt associated with elevated structures will blight commercial and residential structures and detract from the location of institutional facilities. Furthermore, the presence of this elevated structure will create new problems which will be difficult to overcome, will discourage further private investment, and depreciate existing structures in the area.

The depressed structure along the "H" alignment will have less of a detrimental effect upon the Roseville community. It will not act as a community divider to the same extent as would the elevated freeway alignment and the integrity of this community will be maintained. Likewise, the depressed structure will have less of an effect on adjacent properties, and will encourage

the development of high grade construction along its route. With the construction of this depressed structure there is abundant opportunity for renewing a community shopping area between the East-West Freeway and the D. L. & W. railroad which would contain community shopping facilities and institutional structures.

The primary function of freeways is to move volumes of vehicular traffic efficiently; however, this by no means precludes the possibility of having such routes serve additional purposes in urban areas. Such facilities should serve as stimulators and means of redevelopment, as buffers between residential, non-residential and inharmonious land uses and, as physical dividers between self-contained neighborhood units. The chief objective of the city is the attainment of maximum benefits from this major transportation artery in addition to the proper traffic-carrying function of such a roadway.

Economic considerations have a direct influence on the type of construction and location of the East-West Freeway. However, false economies resulting from the desire to secure the cheapest right-of-way and construction will prove very costly to Roseville and to future generations in the city. Furthermore a depressed structure is favored because it can be more easily widened than an elevated structure, when required by future traffic demands.

For these reasons the City of Newark favors the construction of a depressed freeway.

VIII RELATION OF PROPOSED FREEWAY AND "X" ALIGNMENT TO THE NEWARK TRANSPORTATION PLAN.

As designed by the State Highway Department, the proposed depressed structure has inadequacies in terms of the over-all traffic needs of Newark. The following factors must be given further study and considerations:

- A. Interchange with Garden State Parkway. As far as can be determined at this point, no plans have been made for a direct full interchange of the proposed freeway with the Garden State Parkway. As planned, local East Orange Street would be utilized in the proposed connection between the two highways. It cannot be too strongly reiterated that a direct interchange with the Garden State Parkway and the East-West Freeway will be essential for the East-West Freeway to fulfill its function as a major regional highway serving Newark as the hub of the industrial and commercial complex of Northern New Jersey.
- B. Interchange with Midtown Distributor. Similarly, a full interchange between the East-West Freeway and the proposed Midtown Distributor is considered essential, and no facilities are proposed in the design of the depressed structure on the "X" alignment. Adequate provision is made for traffic moving in both directions between the Midtown Distributor and East-West Freeway, to the approach to the Stickney Bridge. As discussed above, Newark conceives of the East-West Freeway serving as the northern sector of its inner loop and the Midtown Connector serving as the western sector. (Map 3, as prepared)

designed, the East-West Freeway will not fully serve this function because of the necessity to leave the loop and to traverse local streets to gain reentry onto the loop. The inner loop concept is recognized throughout the country as one important element in relieving central business district traffic congestion by providing a means by which through traffic can circumvent the central business district. The proposed designs do not accomplish this important aim and the City of Newark earnestly requests the State Highway Department to reconsider the design of this interchange

- C. Location of Exit and Entrance Ramps. The exit and entrance ramps as proposed do not fully meet the needs of Newark. On the "K" alignment no interchange is made in the vicinity of West Market Street and Gould Avenue. This is considered essential to serve the Roseville Section of both the east and west bound traffic. The ramps provided in East Orange are considered inadequate for this purpose. A serious lack of the proposed Freeway is its failure to provide adequate interchanges to serve the Central Business District, the proposed Cultural Center and North Newark in the vicinity of High and Broad Streets. There are three entrances for traffic going east on the existing Stickel Bridge approach but none for west bound traffic. And there are three exits for west bound traffic but none for east bound traffic. The State has informed Newark that no improvements can be made to existing structures at the present time, and consequently cannot provide additional exit and entrance ramps on the Stickel Bridge approach. Not only will this lack of interchange affect the service of the East-West Freeway

to the Central Business District, but will prevent free interchange between the East-West Freeway and the McCarter Highway, the eastern sector of the inner loop. In terms of serving the basic needs of Newark's Central Business District, the proposed freeway will be unsuccessful.

Finally, it is questionable if the existing Stickel Bridge and approach will serve the traffic volumes anticipated by 1975. An engineering study has already indicated that the Stickel Bridge will be inadequate in the near future. The State claims no improvement can be made on existing facilities at this time. The City of Newark requests the State consider further possible improvements to the Stickel Bridge to achieve maximum value of the new East-West Freeway.

COMPARATIVE COSTS OF CONSTRUCTION OF EAST-WEST FREEWAY
(Excluding Cost for Parkway Crossing)
(in Millions)

ALIGNMENT	CONSTRUCTION	TOTAL	WEST ORANGE	ORANGE	EAST ORANGE	NEWARK
J	Embankment	61.0	23.3	6.5	14.3	16.9
J	Viaduct	73.9	23.3	11.5	19.3	19.8
W-3 in West Orange, J in Orange, K-6 in East Orange & Newark	Depressed, except for elevated over Parkway & Lacka- wanna R.R.; no tunnel in West Orange	71.0	20.5	9.8	17.8	22.9
W-3 in West Orange, J in Orange, East Orange & Newark	Depressed, except for elevated over Parkway & Lacka- wanna R.R.; no tunnel in West Orange	79.8	20.5	9.8	17.6	31.9

